

(12) **UK Patent Application** (19) **GB** (11) **2 243 902 A** (13)  
(43) Date of A publication 13.11.1991

(21) Application No 9010628.7

(22) Date of filing 11.05.1990

(71) Applicant  
**D Gilbert (Mould & Dies) Limited**  
  
(Incorporated in the United Kingdom)

**Blantyre Industrial Estate, Blantyre, Glasgow,  
G72 0UP, United Kingdom**

(72) Inventor  
**William Brynes**

(74) Agent and/or Address for Service  
**Cruikshank & Fairweather**  
**19 Royal Exchange Square, Glasgow, G1 3AE,  
United Kingdom**

(51) INT CL<sup>9</sup>  
**F21L 15/00**

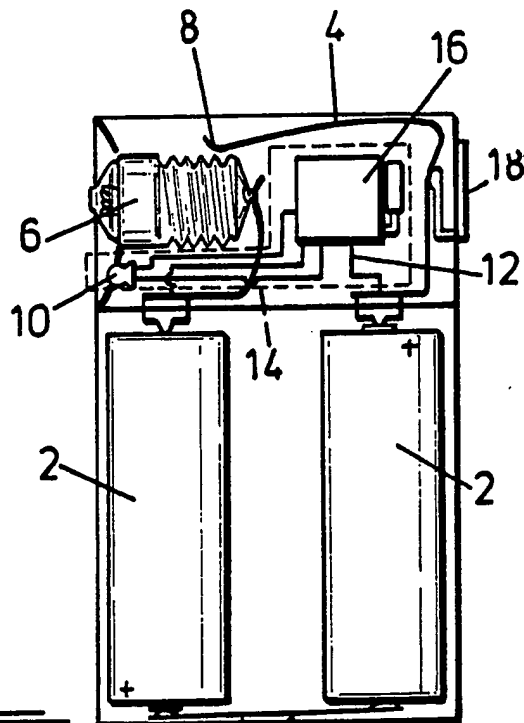
(52) UK CL (Edition K)  
**F4R RE R254 R34Y R358 R417  
U1S S1930**

(56) Documents cited  
**None**

(58) Field of search  
**UK CL (Edition K) F4R RE  
INT CL<sup>9</sup> F21L 15/00**

(54) **Electrical apparatus locating device**

(57) The invention relates to a locating device intended to enable a user to ascertain the whereabouts of an electrical apparatus, for example a torch, in conditions of darkness or semi-darkness. The device is described in the context of a torch having a conventional light-bulb (6) operated through a power-line (4) from a battery arrangement (2) under the control of an on-off switch (8). Arranged in parallel with the power-line (4) is a second line (12) in which is provided a light-emitting diode (L.E.D.) (10) so as to emit at all times when a live battery is present a low-level light signal, which may be constant or intermittent. The L.E.D. (10) signal is controlled by a control device (14) comprising a micro-chip (16).



**FIG. 4**

At least one drawing originally filed was informal and the print reproduced here is taken from a later filed formal copy.

The claims were filed later than the filing date within the period prescribed by Rule 25(1) of the Patents Rules 1990.

**GB 2 243 902 A**

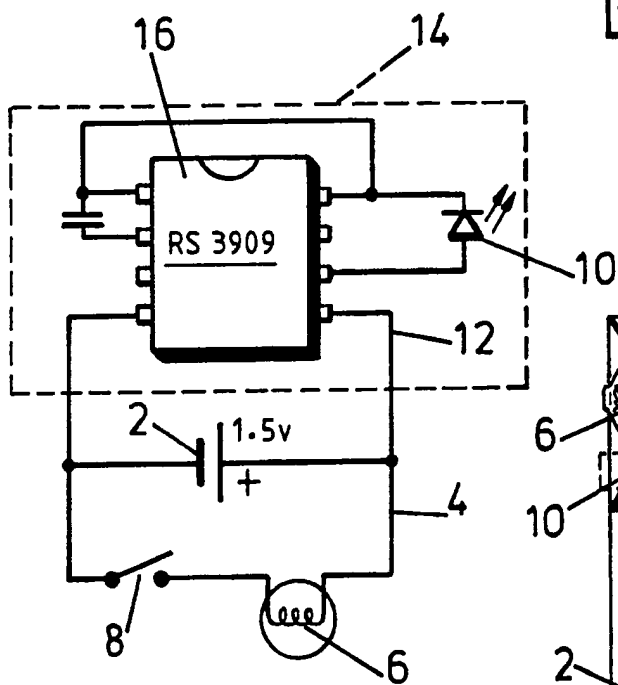
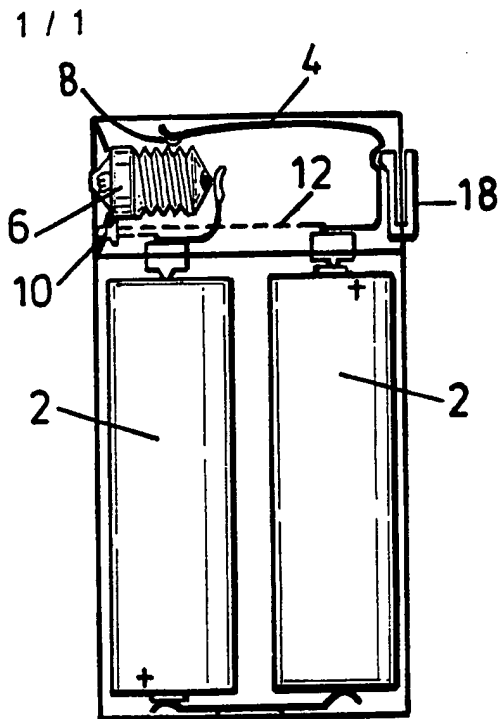
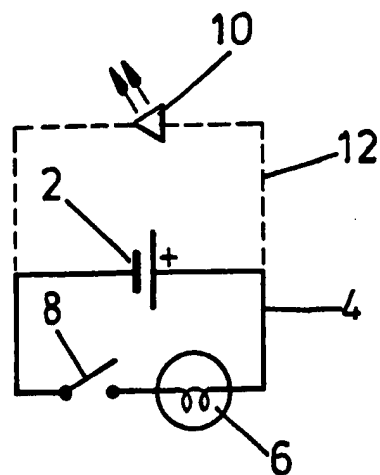
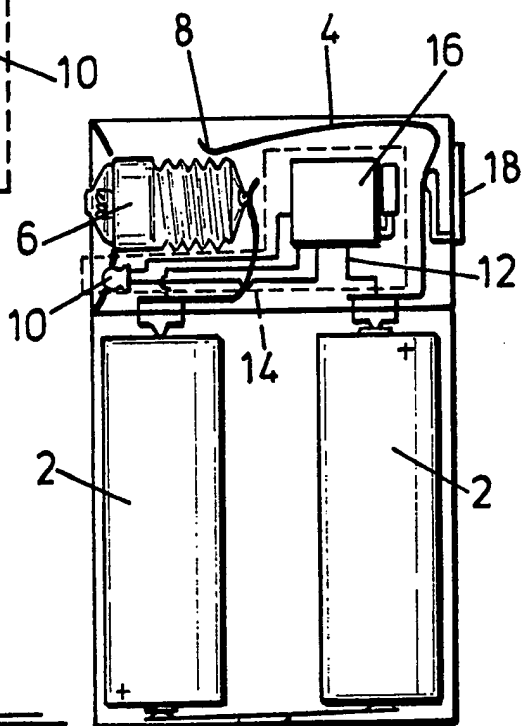


FIG. 4



ELECTRICAL APPARATUS LOCATING DEVICE

The invention relates to locating devices for electrical apparatus.

It frequently occurs that the position of a portion of an electrical installation or a small electrical appliance is difficult to locate in a ready and efficient manner. For example, a safety switch in a complex electrical circuit may be difficult to locate in the event of an incident requiring its immediate operation, which incident may perhaps involve failure of illumination. In other situations, difficulty may be encountered in locating the position of a replacement source of light in darkness, due perhaps to a powercut. In a specific example, a torch may be impossible to find in darkness.

The invention therefore provides an electrical apparatus locating device comprising a circuit portion forming part of the circuitry of said apparatus, said circuit position including a light-emitting diode (L.E.D.) and a power source adapted to operate said L.E.D. continuously in a regular pattern.

Conveniently, where the apparatus is a torch or other portable light source and said power source is a battery, the L.E.D. may be arranged to operate continuously from the battery so as to render the position of the torch readily locatable in the dark.

Preferably, however, in order to avoid undue drain on the batteries over an extended period of time, a

micro-electronic circuit (integrated circuit) may be used as a reliable control circuit to produce an intermittent signal from the L.E.D.. i.e. a flashing light.

There will now be described with reference to the drawings two examples of devices according to the invention. It will be understood that the description is given by way of example only and not by way of limitation.

In the drawings:-

Figures 1 and 2 show a circuit diagram and a lay-out, respectively of a first example; and

Figures 3 and 4 similarly illustrate a second example.

The diagram of Figure 1 shows a battery 2 adapted to supply power through line 4 to the bulb 6 of a torch, Figure 2, when a switch 8 is operated. A light-emitting diode 10 is provided in line 12 in parallel with line 4 so as to emit a low-level constant light visible in conditions of darkness to a person searching for the torch.

Figure 3 is a circuit diagram of the torch lay-out shown in Figure 4. Those parts of this second example which are in common with the first example are given the same reference numerals.

The L.E.D. 10 is, however, provided in a control device 14 comprising an integrated circuit (micro-chip) 16, which acts to operate the L.E.D. in an intermittent manner in order to reduce drain on the batteries 2.

In each of the examples shown, the contacts of the switch 8 are operated by a thumb button 18 in the

conventional manner.

Various modifications may be made within the scope of the invention.

CLAIMS

1. A locating device for electrical apparatus, said device comprising a circuit portion adapted to form part of the circuitry of said apparatus, said circuit portion including a light emitting diode (L.E.D.) and a power source control adapted to operate said L.E.D. in a continuous manner in a pre-determined pattern.
2. A device as claimed in claim 1, wherein the circuitry of which the circuit portion is adapted to form part is that of a torch or other portable light source.
3. A device as claim in either one of claims 1 and 2, wherein the L.E.D. is adapted to be operated under the control of a micro-electronic circuit continuously to produce an at least substantially constant signal.
4. A device as claimed in either one of claims 1 and 2, wherein the L.E.D. is adapted to be operated under the control of a micro-electronic circuit to produce an intermittent signal.
5. A device as claimed in any one of the preceding claims in combination with said apparatus, wherein the L.E.D. is provided in said circuit portion in parallel

with a power supply line of the circuitry of said apparatus so as continuously to emit a low-level light visible in poor light conditions.

6. An electrical apparatus locating device constructed and arranged substantially as hereinbefore described with reference and as shown in the drawings.